

Remarks

Upon entry of the foregoing amendment, claims 1-14 remain pending in the application, with 1, 3, 6, 7, 8, 11, 12, 13 and 14 being the independent claims. Claims 1-14 have been amended. The changes thereto are believed to introduce no new matter, and their entry is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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Version with markings to show changes made

In the Specification:

The Cross-reference to Related Applications section was added at page 1 to indicate that the PCT application published in non-English.

In the Claims:

1. A structure of a work machine [(7)] having a plurality of drive parts which are individually driven and controlled with hydraulic pressure, comprising:
 - a base [(2)];
 - a boom bracket [(12)] horizontally rotatably mounted on the base;
 - a boom [(6)] serving as one of the drive parts, the boom being vertically rotatably attached on the boom bracket [(12)];
 - a pivot pin [(13)] vertically penetrating the base and the boom bracket so that the base and the boom bracket are tightened thereon while the base and boom bracket being horizontally rotatable with respect to each other;
 - hydraulic actuators for driving the respective drive parts;
 - a hose guide member [(14)] fixed to an upper end portion of the pivot pin so that the hose guide member and the boom bracket can be integrally rotated horizontally with respect to the base, and
 - operation oil hoses [(21 and 22)] extended from the base for supplying operation oil to the hydraulic actuators, wherein the operation oil hoses are guided and piped to the inside of the boom via the hose guide member.

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2. The work machine structure according to claim 1, further comprising:

an arm [(5)] serving as one of the drive parts, the arm being relatively rotatably attached on a tip end of the boom, and

a work attachment [(4)] serving as one of the drive parts, the work attachment being relatively rotatably attached on a tip end of the arm, wherein the operation oil hoses which are guided and piped into the boom via the hose guide member are provided for supplying the operation oil to the respective hydraulic actuators [(9, 10)] for driving the work attachment and the arm.

3. A structure of a work machine [(7)] having a plurality of drive parts which are individually driven and controlled with hydraulic pressure, comprising:

a base[(2)];

a boom bracket [(12)] mounted on the base, the boom bracket being formed on its upper end with a pair of boom support portions [(12a)] and provided below each of the boom support portions with a hose guide hole [(12c)];

a boom [(6)] serving as one of the drive parts, the boom being provided at its base end with a pair of supported portions [(6a)] formed in a bifurcated manner, wherein each of the supported portions is pivoted by each of the boom support portions via a horizontal pivot shaft [(18)] so that the boom is vertically rotatably attached on the boom bracket;

hydraulic actuators for driving the respective drive parts of the work machine,
and

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operation oil hoses [(23)] for supplying operation oil to the hydraulic actuators extending from the base, wherein each of the operation oil hoses penetrates through each of the hose guide holes.

4. The work machine structure according to claim 3, further comprising:

a hydraulic actuator [(11)] for driving the boom being arranged on a side of the boom opposite to the base, wherein the operation oil hoses penetrating through the respective hose guide holes are provided to supply operation oil to the hydraulic actuator for driving the boom.

5. The work machine structure according to claim 3 [or 4], wherein the boom bracket is provided with a pair of ribs [(12d)] formed downwardly on both sides of each of the boom support portions so that the operation oil hose penetrating through each of the hose guide hole is passed through each of a valley [(12e)] between both the ribs below each of the support bracket portions.

6. A structure of a work machine [(7)] having a plurality of drive parts which are individually driven and controlled with hydraulic pressure, comprising:

a base [(2)];

a boom bracket [(12)] mounted on the base;

a boom [(6)] serving as one of the drive parts, the boom being vertically rotatably attached on the boom bracket, a supported portion [(6a)] to be pivoted on the boom bracket being joined to a base end of a main body [(6b)] of the boom, and

a reinforcement member [(19)] being plastered on the joint portion between the main body and the supported portion of the boom, wherein the reinforcement member is formed of a plate-like member which becomes thinner toward a tip end of the boom.

7. A structure of a work machine [(7)] having a plurality of drive parts individually controlled and driven by respective hydraulic actuators [(9, 10 and 11)], comprising:

a base [(2)] on which the work machine is attached, the base including an upper plate portion [(2a)] arranged in the vicinity of the work machine;

operation oil hoses extending from the base for supplying operation oil to the respective hydraulic actuators;

end portion connectors [(25)] of the oil hoses being arranged on the upper plate portion, and

operation oil hoses [(21, 22, and 23)] piped on the work machine to be connected to the respective hydraulic actuators, wherein end portions of the operation oil hoses piped on the work machine are detachably connected to the respective end portion connectors of the operation oil hoses extending from the base.

8. A structure of a work machine [(7)] having a plurality of drive parts which are individually controlled and driven with the hydraulic pressure, comprising:

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washer for sealing the hose taking-out opening while allowing the piping of the operation oil hose to the hydraulic actuator for driving the arm.

10. The work machine structure according to claim 8 [(or 9)], further comprising:

a cover [(35)] for sealing the hose taking-out opening, the cover being attached on a portion of the rear surface of the boom forming the hose taking-out opening while allowing the piping of the hose for supplying operation oil to the hydraulic actuator for driving the arm, wherein the cover has an inclined portion [(35b)] from the rear surface of the boom to the inside of the boom along the hose.

11. A structure of a work machine [(7)] having a plurality of drive parts which are individually controlled and driven with the hydraulic pressure, comprising:

a base [(2)];

a boom [(6)] serving as one of the drive parts, the boom being pivoted at its base end on the base, wherein the boom is bent at an intermediate portion [(6d)] thereof so as to be substantially doglegged, and wherein the boom has a rear surface [(6e)] between the bent portion and the tip end thereof, and a rear surface [(6f)] between the bent portion and the base end thereof;

an arm [(5)] serving as one of the drive parts, the arm being pivoted on a tip end of the boom;

a hydraulic actuator [(10)] for driving the arm;

an operation oil hose [(22)] for supplying operation oil to the hydraulic actuator,
the operating oil hose being piped inside of the boom,

a hose attachment plate [(33)] arranged in the vicinity of the bent portion [(6d)]
of the boom, wherein the operation oil hose piped inside the boom penetrates through the
hose attachment plate;

an end portion connector [(25)] of the operation oil hose, the end portion
connector being arranged on the external surface of the hose attachment plate, and

an operation oil hose [(22a)] connected to the hydraulic actuator, an end portion
of the operation oil hose connected to the hydraulic actuator being detachably connected
to the end portion connector of the operation oil hose piped inside of the boom, wherein
the hose attachment plate is arranged in such a manner that an angle [(01)] thereof
formed with the rear surface [(6e)] of the boom between the bent portion and the tip end
becomes substantially equal to [an] another angle [(02)] thereof formed with the rear
surface [(6f)] of the boom between the bent portion and the base end.

12. A structure of a work machine [(7)] having a plurality of drive parts which are
individually controlled and driven with hydraulic pressure, comprising:

a base [(2)];

a boom [(6)] serving as one of the drive parts, the boom being pivoted at its base
end on the base;

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an angle rib [(50)] fixed to a tip end of the boom, wherein a surface of the angle rib to be attached to the rear surface of the boom is extended toward the base end of the boom so as to form an extension portion [(50a)], and

an open hole [(50b)] communicating the inside and the outside of the boom, the open hole being formed on the extension portion.

13. A structure of a work machine [(7)] having a plurality of drive parts which are individually controlled and driven with the hydraulic pressure, comprising:

a base [(2)];

a boom [(6)] serving as one of the drive parts, the boom being pivoted at its base end on the base;

an arm [(5)] serving as one of the drive parts, the arm being pivoted on a tip end of the boom;

a work attachment [(4)] serving as one of the drive parts, the work attachment being pivoted on a tip end of the arm;

a hydraulic actuator [(9)] for driving the work attachment;

an operation oil hose [(21)] for supplying operation oil to the hydraulic actuator, the operation oil hose being piped inside of the boom;

an angle rib [(50)] fixed to the tip end of the boom, wherein the angle rib is provided with an inclined surface [(50c)] from a tip end portion of the angle rib to a rear surface of the boom, and wherein the operation oil hose piped inside of the boom penetrates the inclined surface;

an end portion connector [(25)] of the operation oil hose being arranged on an external side of the inclined surface, and

an operation oil hose [(21a)] connected to the work attachment, wherein an end portion of the operation oil hose connected to the work attachment is detachably connected to the end portion connector of the operation oil hose piped inside of the boom.

14. A structure of a work machine [(7)] having a plurality of drive parts which are individually controlled and driven with hydraulic pressure, comprising:

a base [(2)];

a boom [(6)] serving as one of the drive parts, the boom being pivoted at its base end on the base;

an arm [(5)] serving as one of the drive parts, the arm being pivoted on a tip end of the boom;

an arm fulcrum bracket [(51)] fixed to the tip end portion of a main body of the boom for pivoting a base end of the arm, the arm fulcrum bracket including a main plate member [(52)] and a reinforcement plate [(53)], the main plate member [(52)] being joined to the tip end portion of the boom and projecting further than the tip end portion of the main body of the boom, the reinforcement plate being plastered on the projecting portion of the main plate member, so that the main plate member and the reinforcing plate constitute a pivoting portion for pivoting the base end of the arm.

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In the Abstract:

A pair of supported portions [(6a and 6a)] are provided in a bifurcated manner on the base end of the boom [(6)] of a work machine[(7)], and the supported portions are respectively pivoted on a pair of boom supporting portion [(12a and 12a)] provided on an upper end of a boom bracket[(12)], and a hose guide [(14)] is fixed on an upper end of a swing pin [(13)] for pivoting the boom bracket on a turntable[(2)]. Operation oil hoses [(22)] for an arm cylinder [(10)] and operation oil hoses [(21)] for a bucket cylinder [(9)] are guided and piped into the boom from between both the supported portions. A hose guide hole [(12c)] is provided below each of the boom support portions [(12a)] so that operation oil hoses [(23)] for the boom cylinder [(11)] are inserted into the respective hose guide holes. At an intermediate portion of the rear surface of the boom, the operation oil hoses [(22)] are taken out from the inside of the boom through a hose attachment plate [(33)] and is connected to a respective external hoses [(22a)] connected to the arm cylinder. At a tip end of the boom, the operation oil hoses [(21)] are pulled out from the inside of the boom through a rear side inclined surface [(50c)] of an angle rib [(50)] so as to be connected to respective external hoses [(21a)] in connection with the bucket cylinder.